Just like a capacitor means, an inductor means is a means for storing energy; whereas a transformer means is a means for transforming voltage and/or current, and is definitely not a means for storing energy -- except in special situations where a transformer may intentionally be designed to perform the dual function of being an inductor means as well as a transformer means, such as is the case when a transformer is provided with a substantial air gap in its magnetic circuit. However, the transformer in Agnew's circuit is illustrated as being an ordinary non-energy-storing transformer. (In fact, if a transformer exhibits the characteristic of storing any substantive amount of energy, it is generally considered deficient as a transformer.)

Thus, Examiner's "102" rejection of claim 28 is clearly in error.

In re claim 36

Examiner has rejected claim 36 on the basis of 35 U.S.C. 102(a) as being clearly anticipated by Kohler.

Applicant traverses Examiner's rejection for the following reason.

In claim 36, inter alia, Applicant calls for positive feedback means "comprising saturable inductor means". Kohler does not use or indicate any form of saturable inductor means.

Thus, Examiner's "102" rejection of claim 36 is clearly in error.

IN THE CLAIMS

Please amend, cancel, substitute and add claims as follows.

28. (Amended) A ballast means for a fluorescent lamp, said fluorescent lamp having a first and a second cathode, each cathode having a pair of terminals, said ballast means being adapted to be powered from a source of DC voltage and comprising:

inverter circuit connected with said source of DC voltage and having a pair of output terminals, said inverter circuit: i) being rendered operable as an inverter whenever output current is permitted to flow between said output terminals, thereby providing an AC voltage across said output terminals, and ii) being rendered inoperable as an inverter whenever output current is prevented from flowing between said terminals, thereby removing said AC voltage from said output terminals; and

load circuit comprising an inductor means and a capacitor means connected in series-circuit between said output terminals and said fluorescent lamp, said inductor means being connected [in series] with said capacitor means by way of the terminals of said first cathode to form a series-combination, said series-combination being connected across said output terminals by way of the terminals of said second cathode;

whereby, whenever any one [or more] of the terminals of said cathodes is disconnected from said load circuit, said output current is prevented from flowing, thereby removing said AC voltage from said output terminals by rendering said inverter circuit inoperable.

Please leave claims 29-31 intact.

32. (Amended) The ballast means of Claim 28 [27] wherein a fusible link in comprised in series-circuit with said output terminals.

Please cancel claims 33-35 in their entirety.

Please leave claims 36-39 intact.

Please substitute and/or add the following new claims.

40. In an inverter connected with a DC source and operable to provide an AC voltage at a set of output terminals, the improvement comprising:

means to provide a manifest signal to initiate said inverter into operation provided a load is connected with said output terminals, said signal being provided only when a load is indeed so connected; and

means to make the inverter cease operating whenever there is no load connected with said output terminals.

41. In an inverter connected with a DC source and operable to provide an AC voltage to a load connected across a pair of output terminals, the improvement comprising:

means to provide a manifest signal operative to cause said inverter to self-oscillate whenever a load is connected across said terminals, said signal being provided only when a load is so connected;

whereby said inverter is quiescent and draws no power from the source whenever there is no load connected across said terminals.

42. In a conditionally self-oscillating inverter connected with a DC source and operable to provide an AC voltage to a load connected at a pair of terminals, the improvement comprising:

means to provide a pulse to trigger said inverter into self-oscillation provided the load is connected at the terminals, said pulse being provided only when the load is so connected.

43. A conditionally self-oscillating inverter adapted to be powered from a DC source and to provide an AC voltage across a pair of output terminals, said inverter comprising:

means to provide a manifest signal functional to cause the inverter to initiate self-oscillation provided a load is connected across said output terminals, thereby to provide said AC voltage across said output terminals, said signal being provided only when a load is so connected; and

means to inhibit the self-oscillation whenever there is no load connected across the output terminals, thereby to remove said AC voltage from the output terminals whenever there is no load so connected;

whereby the inverter is quiescent and draws no power from the DC source except when a load is connected across the output terminals.

44. An inverter connected with a DC source and conditionally operable to provide an AC voltage across a pair of output terminals, the improvement comprising:

means to cause the inverter to provide said AC voltage, but only when: i) a load means is connected between the terminals, and ii) a unidirectional current is permitted to flow through this load means.

45. A system for powering a gas discharge lamp having a a first and a second pair of cathode terminals, comprising:

a source having a pair of source terminals between which there is available an inductively limited AC current;

load circuit comprising a pair of load terminals with a capacitor means connected in circuit therebetween, one of said load terminals and one of said source terminals constituting a first pair of ballast terminals, the other load and source terminals constituting a second pair of ballast terminals;

non-linear voltage-limiting impedance means connected across at least one of said pairs of ballast terminals; and

means for connecting said first and second pairs of cathode terminals respectively with said first and second pairs of ballast terminals.

46. A ballast means connected with an ordinary electric power line and operable to power a gas discharge lamp assembly from a pair of output terminals, said gas discharge lamp assembly requiring for proper operation to be powered by an inductively current-limited AC voltage and comprising: i) a gas discharge lamp, ii) a pair of input terminals, and iii) means to permit unidirectional current to flow between said input terminals even when said lamp is not conductive, said ballast means comprising:

rectifier means operable to connect with said power line and to provide a DC voltage;

inverter means powered from said DC voltage and conditionally operable to provide said inductively current-limited AC voltage to said output terminals; and

means to cause the inverter to provide said inductively current-limited AC voltage, but only when a load means is connected across said output terminals, and only when said load means permits the flow of unidirectional current between these output terminals when so connected;

whereby said inverter does indeed provide for proper operation of said lamp assembly whenever its input terminals are connected with said output terminals.

47. In a ballast circuit adapted to power a gas discharge lamp by way of an AC voltage provided at two terminals, the lamp requiring a relatively high voltage for ignition and a relatively low voltage for sustained operation, the improvement comprising:

an inductor, a capacitor, and a circuit-breaking means connected in series-circuit across said terminals, the lamp being effectively connected in parallel-circuit with the capacitor, the inductor and capacitor being operative to interact in series-resonant fashion at the frequency of said AC voltage, thereby to provide a ballasted output voltage across the lamp, the magnitude of this output voltage before lamp ignition being adequate to cause lamp ignition, the magnitude of this output voltage after lamp ignition being adequate for sustained lamp operation, the circuit-breaking means being operative to open-circuit after having had an excessive current flowing through it for longer than a brief period of time, such excessive current indeed flowing through it before lamp ignition but not during sustained lamp operation, lamp ignition normally taking place within said brief period of time;

whereby, if the lamp does not ignite within said brief period of time, the circuit-breaking means open-circuit, thereby to prevent excessive current from being drawn from the ballast circuit.